



COMMONWEALTH of VIRGINIA

Wireless E-911 Services Board

FY 2011 Annual Report



Prepared by the
Virginia Information Technologies Agency
Division of Public Safety Communications
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Table of Contents

Executive Summary	1
State of Enhanced 9-1-1 in the Commonwealth	4
Wireline E-911	4
Wireless E-911	4
State of the Wireless E-911 Fund	6
Wireless E-911 Fund.....	Error! Bookmark not defined.
Wireless Funding Process	8
Conclusion	11
Appendix A – PSAP Funding Detail	12

Executive Summary

The *Code of Virginia* (§56-484.14) requires the Wireless E-911 Services Board (the Board) to report annually to the Governor, the Senate Committee on Finance, the House Committee on Appropriations, and the Virginia State Crime Commission on the following:

- (i) the state of enhanced 9-1-1 services in the Commonwealth,
- (ii) the impact of, or need for, legislation affecting enhanced 9-1-1 services in the Commonwealth,
- (iii) the need for changes in the E-911 funding mechanism provided to the Board, as appropriate, and
- (iv) monitor developments in enhanced 9-1-1 service and multi-line telephone systems and the impact of such technologies upon the implementation of Article 8 (§ 56-484.19 et seq.) of Chapter 15 of Title 56.

The state of enhanced 9-1-1 services in the Commonwealth

Though the original goal was to have all localities providing wireline E-911 service by July 1, 2003, there is still one (1) locality left that is diligently working to deploy this level of service. The locality anticipates that the wireline project will be completed by June 30, 2012.

Wireless enhanced 9-1-1 (E-911) Phase I service, where the caller's telephone number and the address of the cell site are provided to the public safety answering point (PSAP), is essentially complete, with only one deployment remaining. The one locality that has not completed this deployment is among the most rural in Virginia and is aggressively working toward deployment.

The deployment of wireless E-911 Phase II, which provides the PSAP with the caller's actual location by longitude and latitude, is nearing completion as well, with only one deployment remaining. As the Commonwealth approaches completion of the deployment of enhanced 9-1-1 services on traditional telecommunication devices, the focus of the E-911 industry shifts to the future of E-911 and service improvement.

The localities, telecommunications service providers and E-911 vendors should be commended for all of their effort expended thus far to provide the citizens of Virginia with the best E-911 system available. However, emergency calling in the Commonwealth is evolving beyond the traditional 9-1-1 call. Text messaging and instant messaging are becoming a more common method of communicating than traditional two-way voice communication. Pictures and videos are increasingly shared through the use of smart phones. Video and text based communications are now the communications norm for the deaf and hard of hearing.

Yet, with all of these advancements in consumer communications technology, Virginia's legacy 9-1-1 system cannot deliver any of this information to PSAPs. The architecture of the legacy 9-1-1 system is based on circuit switched telephony designed to enable telephone calls to 9-1-1, not data. In order to support the current and future needs of Virginia citizens, we must continue planning for an Internet Protocol (IP)-based communications system referred to as Next Generation 9-1-1 (NG9-

1-1)¹ to enable PSAPs to receive this valuable data. Currently, this planning initiative is being led by the Wireless 9-1-1 Services Board and the Virginia Information Technologies Agency's (VITA's) Public Safety Communications (PSC) Division and is described in the Virginia Statewide Comprehensive 9-1-1 Plan².

The impact of, or need for, legislation affecting enhanced wireless emergency telecommunications services in the Commonwealth

The Wireless E-911 Services Board is recommending one legislative change for the 2012 General Assembly session to prohibit wireless carriers from seeking cost recovery for a reimbursable expense after the close-out of a fiscal year has occurred. The purpose of this legislative change is to establish a period of liability for cost recovery claims.

Also, effective July 1, 2011, the name of the Wireless E-911 Services Board was changed to the E-911 Services Board. The FY 2012 Annual Report and subsequent reports will reflect this change.

The need for changes in the E-911 funding mechanism provided to the Board, as appropriate

At the end of FY 2011, the Wireless E-911 Fund remains fiscally sound, but moving forward, an existing appropriation and transfer from the Wireless Fund to other agencies and programs will challenge the Board's ability to meet their financial obligations to both the wireless carriers and the PSAPs and maintain the viability of the Fund. The current biennial budget includes a \$3.7 million appropriation to the State Police for wireless 9-1-1 call taking. However, all localities in the Commonwealth are currently accepting wireless calls and no longer rely on the State Police to transfer wireless 9-1-1 calls to them. Thus, the justification for the State Police to receive Wireless E-911 funding no longer exists.

Also included in the current biennium budget is an \$8M transfer from the Wireless Fund to the Compensation Board budget to support sheriff's dispatchers. This action may impact the Commonwealth's ability to receive federal E-911 grant funding in the future. However, the impact of the \$8M transfer has already been felt by the PSAP community in the amount of funding available to them for the replacement of outdated equipment and to expand services to the citizens of the Commonwealth. The \$8M transfer to the Compensation Board means that there is \$8M less funding available for future PSAP Grant Program grants to fund critical PSAP projects, as well as plan for NG9-1-1.

¹ NG9-1-1 is an IP-based system comprised of managed IP-based networks (ESInets), functional elements (applications), and databases that replicate traditional E9-1-1 features and functions and provide additional capabilities. NG9-1-1 is designed to provide access to emergency services from all connected communications sources, and provide multimedia data capabilities for PSAPs and other emergency service organizations

²The Plan and its supporting strategic initiatives are available via the following link: <http://www.vita.virginia.gov/isp/default.aspx?id=14860>.

Monitor developments in enhanced 9-1-1 service and multi-line telephone systems

This is a new duty of the Board that was enacted on July 1, 2007. Most of the provisions of Article 8 (§ 56-484.19 et seq.) of Chapter 15 of Title 56 took effect on July 1, 2009, and information requested on these provisions is provided to interested parties.

The following sections of the report provide a more detailed analysis of the current state of E-911 in the Commonwealth, as well as the Wireless E-911 Fund.

State of Enhanced 9-1-1 in the Commonwealth

Wireline E-911

Originally, 37 jurisdictions were eligible for funding, because they had not fully deployed E-911 as of July 1, 2000. All but one (1) of those original localities has deployed E-911 Service. Lee County is the remaining locality and has made great progress on their wireline project. To date, this jurisdiction has completed its third pass on the addressing project, and working with the United States Postal Service (USPS) and their Local Exchange Carrier (LEC) has achieved a verification rate of 73%. This accomplishment is no small feat in a rural and sparsely populated jurisdiction, in which a county-wide addressing project has never been undertaken. In order to obtain the verification rate required by the LEC, part-time County employees are performing verification via phone calls to residents regarding structures that do not yet have addresses. It is anticipated that the jurisdiction will deploy E-911 by the end of fiscal year 2012.

The dedication and support of County leadership and public safety personnel is credited with the success of the project thus far. In conjunction with its current wireline project, the County is also working with surrounding jurisdictions on a Next Generation 9-1-1 (NG9-1-1) shared equipment project that will enable IP-telephony among the participating jurisdictions.

Wireless E-911

The number of wireless 9-1-1 calls has continued to grow rapidly since wireless service was introduced commercially in 1985. Though the rate of growth has slowed in recent years, the number of wireless 9-1-1 calls has surpassed the number of wireline E-911 calls in many Virginia localities. Through the 1990's, a 9-1-1 call placed from a wireless telephone would simply be forwarded to a 10-digit telephone number that went to the local PSAP or to the State Police. Coming in on a 10-digit number meant that the location of the caller, call back number and other important data elements were not provided like they were for wireline E-911. This lack of an automatic location resulted in more time for the call taker to process the call or an inability to locate the caller at all. Several incidents were documented around the country that demonstrated the problems PSAPs were having locating a wireless 9-1-1 caller.

To respond to this issue, in 1996, the Federal Communications Commission (the Commission) released an order requiring wireless service providers to implement enhanced features and location technology. The implementation was to occur in two phases. Phase I provided the PSAP with the caller's telephone number and the address of the cell site receiving the call along with the orientation of the antenna, if the antenna is directional. Phase II provided the PSAP with the actual location of the caller within a defined margin of error depending on the location technology used by the provider (Figure 1 **Error! Reference source not found.**). According to the order, the wireless service provider had to implement Phase I within six months of a request from the PSAP. The timeline for Phase II was contingent on the location technology selected by the wireless service provider, network-based (triangulation) or handset-based (global positioning system – GPS).

Phase II Accuracy

Network based solution:

Accuracy

- 100 meters 67% of the time
- 300 meters 95% of the time

Handset based solution:

Accuracy

- 50 meters 67% of the time
- 150 meters 95% of the time

Figure 1 - FCC Phase II Requirements

One outstanding issue has been over what area the accuracy of Phase II is to be measured. There was stark disagreement between the wireless and E-911 industry leadership on the appropriate area for testing. Because the two location technologies perform differently in different environments, the best alternative for the wireless providers was to have a large test area (nationwide or statewide). This would allow the performance of their solution to be “averaged” across a variety of these environments providing a more general evaluation of the solution’s performance. The E-911 community felt the test area should be limited to each PSAP service area thus providing each PSAP manager with an indication of how the location technology performed in their area. This would also provide assurances that the wireless provider was providing a similar level of performance in all different environments.

In September 2010, the Commission adopted benchmarks for wireless carriers to meet these handset- and network-based accuracy thresholds at the County or PSAP level for increasing percentages of 9-1-1 calls over an eight-year period. Last month, the Commission went further and announced that after the conclusion of the eight-year implementation period in early 2019, it will sunset the existing network-based rule and require all wireless carriers to meet the more stringent location accuracy standards in the handset-based rule. At this time a specific sunset date has not been identified, but these more stringent standards may generate additional costs for which the carriers will seek reimbursement. At this time it is premature for cost projections to be made.

Phase I Project Status

To date, one hundred twenty-nine (129) localities have implemented wireless E-911 Phase I (call back number and cell site location) with all of the wireless service providers serving the locality. A total of 710 out of 711 (99%) Phase I deployments have been completed as of June 30, 2011. The final Phase I deployment will take place in Lee County once its wireline project is completed.

Phase II Project Status

Almost all of the Phase II deployments have been completed as well. To date, one hundred twenty-nine (129) localities have implemented wireless E-911 Phase II (caller location) with all of the wireless service providers serving the locality. A total of 710 out of 711 (99%) Phase II deployments have been completed as of June 30, 2011. The final Phase II deployment will take place in Lee County once its wireline project is completed.

Wireless Responsibility

Section 56-484.16 of the *Code of Virginia* makes clear the General Assembly’s intent that wireless 911 calls be answered by the local PSAP where the call is initiated instead of by the State Police. The *Code* required that by July 1, 2003, all localities be directly taking the wireless 911 calls made within their jurisdiction. Rather than just taking the call as required by Code, many localities opted to deploy Phase I instead. As a result, the success with Phase I deployment translated into success with moving the calls from the State Police to the local PSAP.

Presently, all localities are now accepting all of their wireless 911 calls, including Lee County, which is still working on deploying wireline E-911 service. Currently, Lee County receives a wireless 9-1-1 call without the caller’s number or location information.

State of the Wireless E-911 Fund

Wireless E-911 Fund

The Wireless E-911 Fund is generated by a \$0.75 monthly surcharge collected from each wireless customer whose place of primary use is in Virginia. One question the Board is asked annually is whether the surcharge rate should be adjusted. With the changes to the funding process made during the 2006 General Assembly Session, this question requires a different approach to answer than in previous reports. In the past, the funding required was based on the actual costs incurred by the PSAPs and wireless carriers. Determining sufficiency of the fund and appropriate surcharge required a projection of the expected costs that would be incurred during the fiscal year. With large fluctuations and disparity of the initial, non-recurring costs, accurate projections were often difficult.

The 2006 legislative change (described in the Wireless Funding Process section below) modified the funding process to distribute the majority of the Wireless E-911 Fund based on a formula. As a result, sufficiency of the surcharge is best evaluated against two criteria. First, 30% of the Wireless E-911 Fund is earmarked for wireless service cost recovery. In recommending this change, the Board's intent was that this amount be sufficient to fund the known, on-going costs of the providers. Since the providers have historically only collected approximately 26% of the fund, past projections of known provider costs indicated that this portion of the fund would be sufficient within the current surcharge rate. However, in the current biennium budget, there is an \$8M transfer from the portion of the Wireless E-911 Fund that is earmarked for wireless cost recovery to the Compensation Board. The intent of this transfer is to pay for Sheriffs' dispatchers. In FY 2011 sufficient funding was available from the remaining portion of this earmark to pay all wireless service cost recovery requests, but in future years this may not be the case, especially when considering forthcoming compliance testing guidelines from the FCC.

The second criterion for evaluating the sufficiency of the surcharge is the potential impact to PSAP funding. The localities have come to rely on the wireless E-911 funding source to operate and maintain their PSAPs. Any reduction to the overall funding would be detrimental to service delivery. The surcharge rate must be sufficient so that the distribution formula results in consistent funding to the locality. Historically, the PSAPs have only received 48% of the Wireless Fund for recurring and operational costs. However, the new funding formula distributes 60% of the fund to the PSAPs, resulting in an increase in the overall amount of funding to the PSAPs. Although more funding is available for equipment replacements and upgrades, not all PSAPs have benefited equally. Those PSAPs located within the fastest growing localities have received a greater portion of the fund than those PSAPs located in the slower growing localities. Many PSAPs, mostly small and rural, experienced a significant decrease in funding since the current funding distribution methodology was put into place in 2006.

To provide insight into this trend, the Board established a Wireless Funding Committee in September 2009 to review the Wireless Fund distribution methodology, and if appropriate, recommend changes. The Committee recommended giving the Board the flexibility to extend the data collection period used to calculate the distribution percentages up to 36 months to minimize data anomalies from year to year. The Committee also recommended moving the payment recalculation effective date to coincide with the beginning of the fiscal year to improve the ability of local governments to forecast wireless revenue in the upcoming year. Since these recommendations required legislative change, the Board authorized staff to pursue these changes, but unfortunately,

they were not included in the final budget document released by the 2010 General Assembly. However, the Board did accept the Committee's recommendation to establish an annual minimum of \$40,000 in wireless funding for each PSAP.

Staff pursued these changes once again in the 2011 General Assembly session. The General Assembly voted to accept these changes, as well as two additional items. First, the term "Wireless" was removed from the Board's name. The name of the Wireless E-911 Services Board was changed to the E-911 Services Board. This symbolic change was made in recognition of the Board's policy role in all 9-1-1 technologies. And second, in addition to pre-paid wireless revenue, post-paid wireless revenue would also be collected by the Department of Taxation. This change was recommended in the FY 2010 APA audit of Wireless Fund to leverage the audit capabilities of Taxation.

Although not directly related to the sufficiency of the surcharge, financial assistance is also available to the PSAP community through the E-911 Services Board's PSAP Grant Program. This program was included in the 2006 legislative changes and is funded by the remaining 10% of the Wireless Fund and any remaining carrier funding from the previous fiscal year. As a result of the \$8M transfer from the portion of the Wireless E-911 Fund that is earmarked for wireless cost recovery to the Compensation Board, the amount of funding available for FY 2011 PSAP Grant grants was significantly reduced.

Funding Levels

In order to appropriately analyze the effects of this new funding methodology, it is necessary to review the funding levels for both the wireless carriers and the PSAPs. The total amount of funding received by the carriers for the recovery of costs incurred during FY 2011 was \$4,326,989. This amount is well within the 30% of the Wireless Fund set aside for this purpose, which in FY 2011, was \$13,382,963. Any remaining funding in FY 2010 was transferred into the PSAP Grant Program for the FY 2011 funding cycle. The PSAPs received a total of \$26,765,926 through the 60% formula distribution and were allocated another \$844,577 from the FY 2011 PSAP Grant funding cycle. This amount is significantly less than the \$15,945,527 allocated in FY 2010. As a result, in FY 2011 the PSAPs received a total of \$27,610,503. Compared to FY 2010, when the PSAPs received a total of \$42,693,511 from the 60% formula distribution and the FY 2010 PSAP Grant funding cycle, the overall result is a decrease of 36% in available funding to the PSAPs. A list of funding by locality is provided in Appendix A.

FY	PSAP Funding	Wireless Provider Funding
2000	\$4,316,115	\$396,144
2001	\$7,047,639	\$1,862,736
2002	\$13,930,840	\$3,719,132
2003	\$18,861,283	\$5,288,230
2004	\$16,015,454	\$8,361,966
2005	\$20,086,422	\$8,106,850
2006	\$18,680,037	\$5,371,059
2007	\$25,443,756	\$5,019,411
2008	\$30,858,208	\$5,399,847
2009	\$36,275,235	\$5,078,528
2010	\$42,693,511	\$4,251,126
2011	\$27,610,503	\$4,326,989
Total	\$261,819,003	\$57,182,018

Figure 2 - Wireless E-911 Funding History

Ensuring an appropriate funding level into the future requires sufficient revenue to be generated. Revenue is difficult to project accurately. Even wireless industry experts have had trouble

predicting the growth rate of wireless services. Though current industry subscriber growth rates may result in higher revenue projections, a more conservative estimate of revenue is appropriate, especially in light of the volatility in the telecommunications industry and the economy. Since the actual revenue for FY 2011 was about \$52.8 million, each penny of surcharge generates approximately \$704,000 of revenue annually. It is important to note that there are other draws on the Wireless E-911 Fund that reduce the amount of funding available to the PSAPs and the wireless service providers. The Division of Public Safety Communications (DPSC) and a portion of the Virginia Geographical Information Network (VGIN) Division are funded through Wireless E-911. Both the DPSC and VGIN programs directly support wireless E-911. And starting July 1, 2011 centralized billing agreements for PSAP wireless 9-1-1 services with Verizon and CenturyLink will also be funded through Wireless E-911. Since this funding is contained in the Appropriation Act, it is subtracted before the distribution of funding based on the formulas, thus evenly reducing the amount of funding across the three funding programs.

In addition to the \$8M transfer from the Wireless Fund to the Compensation Board, the current biennial budget also includes a \$3.7 million appropriation to the State Police for wireless 9-1-1 call taking. Just like the \$8M transfer, this appropriation reduces the amount of funding available to the PSAPs and wireless service providers. This appropriation was originally established to provide funding to transfer wireless 9-1-1 calls from the State Police dispatch centers to the local PSAPs. However, all localities in the Commonwealth are currently accepting wireless calls and no longer rely on the State Police to transfer wireless 9-1-1 calls to them. Thus, justification for the State Police receiving Wireless E-911 funding no longer exist and could jeopardize the Commonwealth's ability to receive federal funding in the future.

Additionally, federal legislation was signed into law on December 23, 2004 that requires states that apply for federal E-911 grant funding (or the PSAPs within the states), to certify that no E-911 funding was diverted to other areas. A state that has diverted funding shall be ineligible for federal funding for 18 months after the diversion. On August 13, 2010, the FCC submitted its annual Report to Congress on State Collection and Distribution of 911 and Enhanced 911 Fees and Charges. In this report, the FCC listed the \$8M transfer from the Wireless Fund to the Compensation Board as a diversion from the purposes designated in the funding mechanism. However, the report did identify that the purpose of the diversion was to support Sheriffs' dispatchers. No further action has resulted from this report; however, the Commonwealth's ability to receive federal E-911 grant funding in the future may be impacted.

Wireless Funding Process

The Wireless E-911 Services Board began providing funding to PSAPs and wireless service providers in FY 2000. Since FY 2000, the Board has approved the distribution of over \$261.8 million to localities and over \$57.2 million to the carriers. The amount of funding increased each year as more localities moved to implement the service and more deployments occurred (Figure 2). However, in the most recent fiscal years, the amount of funding has stabilized. As the costs have become more stable, the PSAPs have begun receiving a more constant funding level, which is primarily comprised of personnel funding. As a result, in FY 2006, the Board recommended a legislative change to implement its current formula-based funding process for the PSAPs. This not only made the costs to the Board more predictable, but also reduced much of the bureaucratic paperwork required under the previous funding process. These changes were codified with the passage of Senate Bill 395 during the 2006 General Assembly session.

This current approach to funding splits the Wireless E-911 Fund into three parts. The first part is a 60% allocation to be distributed to the localities for PSAP operations. The distribution formula for this portion of the funding is based on the percentage of the PSAPs costs and call load to the total throughout the Commonwealth. To ensure that the smallest PSAPs in Virginia get a fair share of the funding, the Board established an annual minimum funding level of \$40,000 for each PSAP, which became effective October 2010. Funding from the 60% allocation is distributed to the PSAPs each month based on the wireless E-911 surcharge revenue collected in the previous month. The 60% allocation represents an overall increase of funding to the PSAPs since historically they have received approximately 46% of the fund for recurring costs. However, while this funding replaces the funding provided for recurring costs of wireless E-911, it may not cover the non-recurring costs such as equipment replacement. The projected increase in funding (the difference between 46% and 60%) will likely address these non-recurring costs (over the life cycle of the equipment) in larger localities, it will not in many smaller localities. As a result, the Board also recommended the creation of the second partition of the Wireless E-911 Fund, the Wireless E-911 PSAP Grant Program.

The Wireless E-911 PSAP Grant Program utilizes a 10% allocation of the Wireless E-911 Fund and is intended to assist the localities with the most need. While the legislation provides the Board with great latitude in the adoption of grant guidelines, the grant focus will be on equipment upgrades and ensuring continuity of the wireless E-911 service into the future. The Board formed a grant committee to develop grant guidelines as soon as the legislation was approved to ensure that funding would be available to the localities as quickly as possible. Logistically, the Board was not able to implement the full grant process until the FY 2008 funding cycle, but the Board accepted emergency grant requests in FY 2007 to ensure that no locality would lose funding during the transition from the old process to the new.

In addition to the 10% allocation of the Wireless E-911 Fund, the grant program will also receive the remaining funding from the portion of the Fund earmarked for CMRS Cost Recovery. Wireless service providers can seek cost recovery for direct and reasonable costs for the deployment and operation of the wireless E-911 network. Since 60% of the Wireless E-911 Fund is distributed to the localities and 10% is allocated for PSAP grants, 30% remains for this part of the Fund allocation. Any funding remaining in this part of the Fund at the end of the fiscal year will be transferred to the grant program. Any funding remaining in the grant program at the end of the fiscal year will be distributed to the localities in the same manner as the 60% part of the Fund; however, the Board may retain any or the entire amount if a specific need is identified in the next fiscal year.

In FY 2011, the amount of PSAP grant awards totaled only \$844,577. When compared to the amount of grant awards made in FY 2010, which was \$15,945,527, a 95% decrease in funding occurred. The reasons for this dramatic decrease are threefold. One, the amount of FY 2010 PSAP Grant awards significantly reduced the Wireless E-911 fund balance. Two, \$8M was transferred from the Wireless E-911 Fund to the Compensation Board. And three, since there were insufficient Wireless E-911 funds in FY 2010, centralized billing agreements for PSAP wireless 9-1-1 services with Verizon and CenturyLink were paid as FY 2011 PSAP grants. However, even with limited funding, the most critical grants for equipment replacement were still funded.

Despite the decrease in funding, the PSAP Grant Program continues to provide critical 9-1-1 equipment and services to the PSAPs, as well as provide funding for innovative 9-1-1 solutions. The potential of the PSAP Grant Program can be illustrated with grant recipients whose projects

represent 9-1-1 best practices, which have received national and regional recognition. The first project, Northern Virginia Regional Centerline Routing, is a regional initiative supported by the Alexandria, Arlington, Fairfax, Loudon, and Prince William PSAPs. This geographic information system (GIS) project was selected to receive a Special Achievement in GIS award at the 2011 Esri International User Conference. The outcome of this project is an important component in a regional effort for Computer Aided Dispatch (CAD) interoperability. The second project, Mountain Empire Regional GIS Data Repository, is another regional GIS initiative, which is supported by a group of PSAPs located in southwestern Virginia. The Bristol, Lee, Russell, Scott, Smyth, and Washington PSAPs were awarded a High Technology in Government Award by the Southwestern Virginia Technology Council for a project that will increase data reliability and data sharing capabilities in an efficient and redundant manner.

And finally, efforts to promote NG9-1-1 technology pilots through the PSAP Grant Program received a boost from a \$1M matching grant from the ENHANCE 911 Grant Program, offered through the National Highway Traffic Safety Administration, and awarded on September 25, 2009. To date, three NG9-1-1 demonstration projects are currently underway and supported by VITA's PSC Division, with another project set to begin late in the third quarter of 2011. The active projects are situated in southside, southwest and the New River Valley regions of the Commonwealth. The focus of these projects is to test the various technical components, and related issues, of a NG9-1-1 network.

- The southside project, which includes the counties of Franklin, Patrick, and Pittsylvania and the city of Danville, is evaluating the delivery of wireline, wireless and VoIP 9-1-1 calls via an IP network maintained by a Competitive Local Exchange Carrier (CLEC) to 9-1-1 centers with IP-enabled telephony equipment.
- The southwest project, which includes the counties of Dickenson, Lee, and Wise and the city of Norton, is focusing on overcoming the issue of limited availability of local IP connectivity and developing a recurring cost model that will be viable in the most economically challenged areas of Virginia.
- And finally, the New River Valley project, which includes the towns of Blacksburg and Christiansburg and Montgomery County, is investigating the deployment of a regional broadband IP network that can support several public safety communication applications through an integrated interoperability governance structure.

The project slated to begin later this year will involve a NG9-1-1 project utilizing an existing robust microwave network in the Tidewater region.

The opportunity to upgrade our existing 9-1-1 communications system is not merely a compelling opportunity, but an imperative. The current planning initiative led by the 9-1-1 Services Board and VITA's PSC Division will be completed by the end of calendar year 2011. The outcome of this initiative will be an implementation strategy for NG9-1-1, which must include recommendations for the future role of the PSAP Grant Program as a potential and viable funding source, if NG9-1-1 is to become a statewide reality.

Conclusion

The Wireless E-911 Services Board continues to be effective in their role of promoting and assisting with the deployment of enhanced 9-1-1 services throughout the Commonwealth. As a result, Virginia continues to be a nationally recognized leader in E-911 and NG9-1-1. The next role for the Board will be to help PSAPs transition to NG9-1-1. Planning for this transition has already begun and a NG9-1-1 implementation strategy document will be available by the end of calendar year 2011.

For the upcoming 2012 General Assembly session only one change is proposed. This change is to prohibit wireless carriers from seeking cost recovery for a reimbursable expense after the close-out of a fiscal year has occurred. The purpose of this legislative change is to establish a period of liability for cost recovery claims. Also, effective July 1, 2011, the name of the Wireless E-911 Services Board was changed to the E-911 Services Board. The FY 2012 Annual Report and subsequent reports will reflect this change. Once a statewide plan for NG9-1-1 plan has been created, these reports, most likely, will include legislative changes for NG9-1-1.

The implementation of statewide wireline enhanced 9-1-1 has progressed with only one (1) locality remaining. The locality anticipates that the wireline project will be completed by June 30, 2012. The implementation of wireless enhanced 9-1-1 is also nearing completion. To date, one hundred twenty-nine (129) localities have implemented wireless E-911 Phase I (call back number and cell site location). Only one deployment in one locality remains. More than 99% of all wireless telephone service subscribers now have Phase II service, which provides the longitude and latitude of the caller. And only one deployment in one locality remains for the deployment of this service as well.

The Appropriations Act for the current biennium budget continues the transfer of \$3.7 million to the Virginia State Police and the \$8M transfer from the Wireless E-911 Fund to the Compensation Board to support Sheriffs' dispatchers. These transfers may impact the Commonwealth's ability to receive federal funding in the future. And starting July 1, 2011 centralized billing agreements for PSAP wireless 9-1-1 services with Verizon and CenturyLink will also be funded through Wireless E-911.

The Commonwealth of Virginia has positioned itself well for the new and coming challenges to the E-911 system. Despite the decrease in funding for PSAP grants in FY 2011, the PSAP Grant Program continues to provide critical 9-1-1 equipment and services to the PSAPs, as well as provide funding for innovative 9-1-1 solutions, such as the Northern Virginia Regional Centerline Routing and the Mountain Empire Regional GIS Data Repository projects. Furthermore, with the assistance of funding through the federal ENHANCE 911 Grant Program, three NG9-1-1 technology demonstration projects are currently underway and supported by VITA's PSC Division, with another project set to begin late in the third quarter of 2011. And finally, the Board and DPSC staff continues to plan for an IP-based communications system to support 9-1-1. At the end of calendar year 2011, a NG9-1-1 implementation strategy document will be available.

Appendix A – PSAP Funding Detail

PSAP	FY 2008 Total	FY 2009 Total	FY 2010 Total	FY 2011 Total
Alexandria Police Communications	\$515,627.31	\$544,713.62	\$621,412.96	\$581,296.02
Alleghany County	\$47,133.80	\$44,024.83	\$36,964.21	\$38,866.81
Amelia County	\$40,362.41	\$38,012.41	\$37,336.65	\$39,401.15
Amherst County Emergency Communications	\$41,450.54	\$50,669.45	\$60,876.43	\$67,423.03
Appomattox County	\$39,838.51	\$40,688.58	\$47,012.72	\$49,407.30
Arlington County PSCC	\$830,447.19	\$772,632.14	\$1,024,052.32	\$779,521.14
Augusta County	\$126,624.52	\$142,067.50	\$139,617.87	\$134,804.60
Bath County	\$43,088.48	\$39,393.52	\$37,541.37	\$39,428.51
Bedford Communications Center	\$79,313.22	\$83,919.13	\$89,625.51	\$97,178.19
Blacksburg Police Communications	\$62,850.76	\$57,606.50	\$62,861.24	\$68,411.84
Bland County	\$44,660.23	\$43,631.07	\$42,412.42	\$40,596.33
Botetourt County GIS-Communications	\$60,713.51	\$61,690.24	\$58,628.63	\$52,880.50
Bristol 9-1-1 Communications	\$81,695.93	\$83,961.02	\$75,684.16	\$76,083.29
Brunswick County	\$126,542.41	\$129,696.97	\$96,258.65	\$78,792.50
Buchanan County	\$39,838.51	\$38,738.99	\$34,693.96	\$38,427.06
Buckingham County	\$45,817.84	\$44,705.06	\$44,684.30	\$41,298.85
Campbell County	\$252,691.64	\$265,402.97	\$284,551.69	\$286,442.80
Caroline County	\$97,721.96	\$99,933.95	\$89,536.15	\$73,933.94
Charles City County	\$44,382.81	\$43,700.44	\$35,634.57	\$38,382.97
Charlotte County	\$44,126.94	\$42,411.95	\$38,508.81	\$39,463.29
Charlottesville, UVA, Albemarle County ECC	\$557,064.42	\$586,644.78	\$555,348.84	\$485,024.68
Chesapeake Police Communications	\$1,309,264.24	\$1,434,751.37	\$1,391,854.77	\$1,302,655.57
Chesterfield County ECC	\$739,023.31	\$845,274.94	\$895,878.81	\$883,135.13
Chincoteague	\$28,541.69	\$41,839.48	\$35,971.57	\$38,513.99
Christiansburg Police Communications	\$43,928.62	\$41,732.31	\$39,122.42	\$39,743.24
Clarke County 9-1-1	\$39,919.94	\$38,329.15	\$36,647.72	\$36,126.99
Colonial Heights 9-1-1 Communications	\$127,723.31	\$90,893.28	\$78,646.14	\$80,128.92
Covington 9-1-1 Communications	\$40,605.61	\$39,176.34	\$42,709.71	\$41,060.62
Craig County	\$43,239.43	\$40,280.23	\$35,390.00	\$38,594.20
Culpeper Joint 9-1-1 Center	\$72,346.80	\$74,334.12	\$83,903.79	\$97,390.13
Cumberland County	\$44,008.20	\$53,035.99	\$50,856.79	\$42,246.23
Danville Emergency Services	\$119,270.42	\$139,074.19	\$130,090.01	\$122,059.82
Dickenson County	\$85,405.59	\$56,853.20	\$39,792.43	\$57,392.56
Dinwiddie County	\$46,479.22	\$46,482.01	\$56,867.08	\$45,191.04

Eastern Shore 9-1-1	\$119,299.63	\$124,729.62	\$114,715.99	\$101,295.97
Emporia Police Communications	\$62,264.13	\$45,965.39	\$38,757.68	\$58,783.61
Essex County	\$39,838.51	\$37,908.06	\$33,993.04	\$38,285.14
Fairfax County PSCC	\$4,184,438.88	\$4,795,982.12	\$4,467,006.78	\$4,730,568.34
Farmville Police Communications	\$106,725.44	\$140,637.30	\$96,095.14	\$70,389.46
Floyd County	\$44,883.26	\$65,539.23	\$89,968.54	\$59,572.64
Fluvanna County	\$54,586.72	\$81,201.07	\$69,683.20	\$63,808.40
Franklin County	\$52,543.56	\$49,512.71	\$55,145.64	\$66,099.08
Franklin Police Communications	\$44,178.41	\$43,214.08	\$51,128.30	\$57,591.24
Frederick County PSCC	\$50,883.18	\$61,530.15	\$62,929.37	\$61,989.57
Fredericksburg Police Communications	\$205,164.03	\$198,683.53	\$164,072.90	\$127,035.60
Giles County	\$39,978.16	\$37,722.61	\$33,683.12	\$38,208.27
Gloucester County	\$39,838.51	\$42,341.16	\$44,398.61	\$41,434.86
Goochland County	\$44,861.22	\$43,902.60	\$39,064.28	\$39,515.05
Greene County	\$46,124.97	\$40,372.75	\$34,573.70	\$38,290.02
Greensville Sheriff's Communications	\$39,838.51	\$37,670.96	\$33,683.12	\$38,208.27
Halifax County	\$101,810.19	\$79,698.27	\$63,337.29	\$58,663.17
Hampton Police Communications	\$420,970.89	\$407,089.81	\$428,416.17	\$421,714.03
Hanover County ECC	\$342,804.33	\$347,490.20	\$286,447.98	\$322,248.04
Harrisonburg - Rockingham ECC	\$217,619.30	\$240,086.25	\$247,155.63	\$260,787.99
Henrico County	\$930,591.56	\$1,138,933.32	\$1,167,381.75	\$1,138,381.68
Highland County	\$39,838.51	\$40,087.82	\$37,919.60	\$39,348.27
Hopewell Police Communications	\$45,412.76	\$46,241.09	\$42,338.22	\$48,022.68
Isle of Wight Sheriff's Office	\$124,187.22	\$100,902.99	\$85,757.82	\$83,454.58
James City County ECC	\$134,387.05	\$164,921.85	\$180,392.04	\$186,295.37
King & Queen County	\$40,880.09	\$38,366.46	\$34,501.38	\$38,411.40
King George County	\$108,036.85	\$95,159.96	\$80,700.48	\$81,208.41
King William County	\$44,370.65	\$42,350.55	\$38,174.84	\$39,330.10
Lancaster County	\$41,925.73	\$39,650.81	\$35,873.48	\$38,775.17
Lee County	\$40,003.61	\$37,748.07	\$34,333.17	\$38,417.17
Loudoun County Fire Communications	\$454,318.30	\$638,297.74	\$656,772.21	\$632,175.00
Louisa County Sheriff's Office	\$45,744.07	\$52,946.48	\$51,437.86	\$47,918.77
Lunenburg County	\$47,607.65	\$47,229.80	\$43,780.19	\$42,697.86
Lynchburg ECC	\$238,581.64	\$278,146.74	\$283,013.44	\$288,077.80
Madison County	\$43,698.65	\$41,237.31	\$39,008.24	\$39,738.61
Martinsville - Henry County 9-1-1	\$136,699.13	\$144,266.69	\$138,379.84	\$137,707.65
Mathews County	\$39,838.51	\$37,670.96	\$36,118.16	\$39,013.97
Mecklenburg County	\$101,627.79	\$98,557.48	\$107,691.45	\$137,999.50
Middlesex County	\$41,607.65	\$40,018.29	\$40,911.91	\$40,624.19

Montgomery County	\$43,621.87	\$42,652.84	\$39,303.98	\$39,720.26
Nelson County	\$42,277.51	\$40,988.66	\$38,822.66	\$39,720.02
New Kent County	\$41,020.23	\$39,918.91	\$35,910.95	\$38,749.28
Newport News Police Communications	\$571,027.25	\$708,725.38	\$736,496.03	\$729,710.72
Norfolk Emergency Services	\$1,324,923.45	\$1,225,150.06	\$1,285,193.74	\$1,353,699.72
Northumberland County	\$42,202.05	\$38,545.15	\$34,527.88	\$38,487.79
Norton 9-1-1 Communications	\$40,024.30	\$39,341.33	\$37,021.31	\$39,139.34
Nottoway County	\$41,958.08	\$44,042.08	\$41,735.50	\$40,245.55
Orange County Communications	\$88,565.63	\$101,223.01	\$95,419.47	\$106,814.29
Page County EOC	\$99,855.96	\$82,111.11	\$69,464.30	\$122,964.12
Patrick County	\$45,208.48	\$40,456.52	\$36,803.24	\$39,029.13
Petersburg Police Communications	\$280,997.85	\$282,343.31	\$359,092.30	\$462,883.07
Pittsylvania County Emergency Management	\$45,472.30	\$54,496.28	\$60,102.40	\$65,954.93
Poquoson Police Communications	\$48,465.87	\$12,938.10		
Portsmouth Police Communications	\$533,622.36	\$539,048.60	\$1,198,919.45	\$701,918.07
Powhatan County Emergency Services	\$56,897.08	\$52,980.13	\$44,929.40	\$42,732.78
Prince George County	\$92,931.09	\$122,397.40	\$139,550.04	\$160,618.77
Prince William County PSCC	\$828,702.88	\$884,133.19	\$855,273.52	\$718,672.15
Pulaski County	\$44,795.52	\$44,502.80	\$40,462.07	\$39,909.91
Radford Police Communications	\$43,537.49	\$42,705.49	\$38,855.75	\$39,522.68
Rappahannock County	\$40,120.06	\$39,631.04	\$35,727.99	\$38,683.86
Richmond County	\$43,198.41	\$41,787.57	\$37,730.72	\$39,219.98
Richmond Police Communications	\$1,064,693.59	\$903,518.63	\$689,281.88	\$1,064,867.34
Roanoke Communications Dept.	\$498,472.21	\$630,817.53	\$650,778.56	\$650,778.56
Roanoke County Police Communications	\$209,701.85	\$213,647.12	\$237,439.98	\$286,512.04
Rockbridge Regional PSCC	\$111,413.29	\$98,958.04	\$99,539.94	\$114,017.95
Russell County	\$44,104.59	\$39,540.07	\$35,858.55	\$38,896.53
Salem Police Communications	\$99,394.92	\$135,964.65	\$105,189.06	\$128,611.37
Scott County	\$43,511.28	\$45,088.82	\$43,184.14	\$42,610.59
Shenandoah County Emergency Communications	\$106,030.00	\$113,689.23	\$91,621.52	\$84,822.46
Smyth County 9-1-1	\$41,536.86	\$38,771.78	\$34,640.15	\$38,438.94
Southampton County	\$44,868.12	\$43,537.07	\$35,947.84	\$38,485.93
Spotsylvania County Emergency Communications Dept.	\$165,226.48	\$180,934.81	\$174,217.34	\$172,717.05
Stafford County Sheriff's Communications	\$262,421.68	\$295,777.20	\$227,472.27	\$207,000.17
Staunton 9-1-1	\$77,542.62	\$72,678.65	\$62,217.30	\$60,695.87

Communications				
Suffolk Police Communications	\$204,923.50	\$247,055.40	\$220,028.21	\$208,412.76
Surry County	\$41,008.81	\$54,894.24	\$60,004.90	\$60,587.44
Sussex County	\$41,535.17	\$44,519.31	\$41,689.39	\$94,650.63
Tazewell County	\$39,970.84	\$52,550.48	\$59,329.01	\$57,080.11
Twin County E-911	\$78,718.87	\$84,202.47	\$86,805.56	\$81,025.96
Vinton 9-1-1 Communications	\$44,669.73	\$67,887.16	\$110,042.88	\$30,393.37
Virginia Beach Communications Division	\$1,836,375.83	\$1,951,500.47	\$1,607,833.41	\$1,705,382.44
Warren County	\$49,291.88	\$45,582.45	\$38,730.01	\$39,400.00
Warrenton - Fauquier Joint Communications Center	\$92,341.48	\$98,074.47	\$99,868.27	\$124,803.77
Washington County	\$43,486.05	\$40,519.66	\$46,218.57	\$46,218.57
Waynesboro 9-1-1 Communications	\$109,149.49	\$121,968.95	\$123,595.48	\$111,568.11
West Point 9-1-1 Communications	\$39,838.51	\$37,670.96	\$33,894.31	\$39,117.43
Westmoreland County	\$44,475.74	\$43,065.93	\$39,409.89	\$39,613.37
Williamsburg Public Safety Communications Center	\$40,378.52	\$88,143.51	\$25,331.30	
Winchester Fire/Rescue Communications	\$43,394.59	\$47,449.10	\$49,042.05	\$44,913.96
Wise County	\$67,930.22	\$47,062.52	\$37,721.84	\$39,460.11
Wythe County	\$43,819.45	\$41,012.31	\$37,375.22	\$39,190.10
Wytheville Public Safety E-911	\$42,236.43	\$39,739.72	\$35,708.13	\$38,714.89
York County Fire Communications	\$201,638.47	\$222,975.28	\$226,907.29	\$283,469.31
	\$25,233,285.39	\$26,949,230.92	\$26,747,984.21	\$26,765,926.36